

Application No. 10/022,668
Docket No. 2001U013.US
Reply to Office Action Dated July 27, 2004

Remarks

Copending Applications

The Applicant would like to make the Examiner aware of the following copending Applications:

U.S.S.N. 10/023,255

U.S.S.N. 10/023,256

U.S.S.N. 10/285,850

Section 102 Rejections

The rejection of Claims 1-9 and 11-17 under 35 U.S.C. § 102(b) as being anticipated by *Imuta et al* (EP 0 893 454 A1) was maintained. The Applicant traverses this rejection, as the Applicant's claimed invention cannot be "at once envisaged"¹ by one skilled in the art from *Imuta*, and thus anticipated, "without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference"². Stated another way, the disclosure of a large genus does not necessarily anticipate a claim to a narrower specie, as the Applicant outlines below.

Anticipation of a claim can be found when a prior art reference discloses every limitation of the claimed invention, either explicitly or inherently.³ However, as described by the court in *In re Petering* and by courts in other holdings described below, anticipation over a single reference cannot be found when one skilled in the art must select portions of teachings within the reference, and those portions are not limited or

¹ MPEP § 2131.02, 2100-75 (Rev. 2 May 2004), citing *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962), finding that the disclosure of a generic chemical structure that is not particularly limited in its substituents does not anticipate a claim to a specie of a chemical compound, but that only the more limited embodiment (describing only 20 compounds) in the same disclosure was adequate for an anticipation rejection.

² *In re Arkley*, 172 USPQ 524, 526, 455 F.2d 586, 587 (CCPA 1972).

³ *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987).

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delineated in a way that is directed to the claimed invention. The situation in *Petering* is perhaps the most analogous to the present situation.

In *Petering*, the claim at issue included the limitation to a chemical structure general to isoalloxazine with the definition

R is an omega-monohydroxyalkyl group containing from two to six carbon atoms inclusive, R(3) and R(4) are members selected from the group consisting of lower-alkyl, lower-alkoxy, amino and a polymethylene group linked to the aromatic ring to form a carbocyclic ring having six carbon atoms, R(2) and R(5) are members selected from the group consisting of hydrogen, lower-alkyl, lower-alkoxy and amino, and wherein R(2), R(3), R(4) and R(5) when taken together include not more than one amino group⁴

The prior art used by the Examiner in a section 102 rejection disclosed a chemical formula general to isoalloxazine, with the description "wherein X, Y, Z, P and R' represent either hydrogen or alkyl radicals, R a side chain containing an OH group."⁵ In finding that this alone did not support rejection under section 102 of the claimed invention, the *Petering* court stated that

[n]ext we consider the legal effect of the generic and specific descriptions of isoalloxazine structures in the [prior art] patent. The generic formula of [the prior art], "wherein X, Y, Z, P and R' represent either hydrogen or alkyl radicals, R a side chain containing an OH group," encompasses a vast number and perhaps even an infinite number of compounds since there is no express limit on the size of the alkyl group or the structure and size of R. Even though appellants' claimed compounds are encompassed by this broad generic disclosure, we do not think this disclosure by itself describes appellants' invention, as defined by them in any of the appealed claims, within the meaning of 35 U.S.C. 102(b).⁶

⁴ In re *Petering*, 301 F.2d 676, 677; 133 USPQ 275 (CCPA 1962).

⁵ *Id.* at 678.

⁶ *Id.* at 681. (emphasis added). The court did find a more narrowed description that described a much smaller genus that was held to support a rejection of anticipation. See note 1 *supra*.

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The Applicant's contend that the present situation in citing *Imuta* against the Applicant's claims is analogous to the situation in *Petering*, and hence, *Imuta* does not anticipate under the meaning of section 102.

In the present situation, the Applicant's claims include chemical species having R and R' groups that are "non-bulky" and "bulky", respectively, and further limited as seen in the claim. *Imuta* discloses four very large genera primarily directed to symmetrical chemical species wherein the analogous "R" and "R'" groups are identical. For example, in the embodiment of *Imuta* at page 57, formula (IV), each "R" groups is defined as

a hydrogen atom, a hydrocarbon group, a halogenated hydrocarbon group, an organosilyl group or a substituent having at least one element selected from among nitrogen, oxygen, phosphorous, sulfur and silicon.

This alone could disclose literally millions of different types of compounds, not even taking into account the variability of the other parameters in (IV) such as "M", "k", "X", etc.

And while there are several locations⁷ in the lengthy 87 page disclosure of species that might lead to Applicant's claimed invention, there are at least 220 specifically disclosed species, as well as all of the working examples, that clearly teach species in which the corresponding R and R' groups are identical.⁸ Thus, unlike the situation in *Petering* where a narrower embodiment was found to disclose the claim at issue under section 102,⁹ *Imuta* discloses no such narrower embodiment that would encompass Applicant's claim; and in fact, the narrower 220 or so disclosed species of *Imuta* actually teaches away from Applicant's claimed invention.

⁷ At page 10, line 55, for example, it states that "R¹ groups may be the same or different from each other", yet the remainder of the disclosure and the specific embodiments at pages 13-19 are directed to symmetrical species. The same is true of the corresponding statement for the corresponding embodiments at page 29, line 27; page 40 line 27; page 57, line 40 and page 58 line 54.

⁸ In *Imuta*, corresponding "R" and "R'" groups could be, for example, the "R1" groups of page 10, structure (I"), or the specifically named phenyl rings of structure II on page 29, or R' and R" of structure IV-1 on page 58.

⁹ In re *Petering* at 681.

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And even at those few disclosures in *Imuta* that use the phrase “may be the same or different” to modify the analogous “R” and “R’” features of Applicant’s invention, there is still no explicit or inherent disclosure of the claimed features:

R is a non-bulky substituent selected from straight and branched chain alkyl groups; and

R’ is a bulky substituent selected from alkyl, alkenyl, cycloalkyl, alkylaryl, arylalkyl, polymeric groups and heteroatom containing groups thereof; wherein there is branching within three atoms of Y and wherein R’ comprises from 3 to 50 non-hydrogen atoms

One skilled in the art, in viewing *Imuta*, would clearly have to “pick and choose” in order to arrive at R’ as a “bulky substituent . . . wherein there is branching within three atoms of Y”. This type of “picking and choosing” does not support a rejection of anticipation, as held by the courts in interpreting section 102.

This situation is also analogous to that in *In re Arkley*,¹⁰ wherein the Applicant claimed a chemical compound that was found to be a specie of a broad genus disclosed in a prior patent. The court looked at the fact that the prior art reference disclosed a generic class of compounds represented by a chemical formula that could amount to at least 230,000 compounds. The court found that the prior art disclosure, even in light of the disclosure of two working examples to the “exact precursors” to the Applicant’s claimed specie, was not enough to amount to a proper section 102 type of rejection.¹¹

More recently, the Federal Circuit in *Akzo v. U.S. International Trade Commission*¹² followed *In re Arkley* in a disputed patent to chemical technology. In *Akzo*, the Applicant claimed a method of extruding a “spinning dope . . . comprising a polyamide and a solvent of sulfuric acid of at least 98% concentration”.¹³ The prior art

¹⁰ *In Re Arkley*, 172 USPQ 524, 455 F.2d 586 (CCPA 1972).

¹¹ *Id.* at 588.

¹² 808 F.2d 1471, 1 USPQ2d 1241 (Fed. Cir. 1986).

¹³ *Id.* at 1479.

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disclosed a similar process, wherein "concentrated sulfuric acid" was disclosed. The court found that this disclosure did not amount to anticipation. In particular, the court stated that the "Commission also concurred with the ALJ and found that concentrated sulfuric acid is not inherently 98% sulfuric acid to one skilled in the art."¹⁴ Thus, the small sub-genus of "98% sulfuric acid" is not inherently anticipated by a large genus of "concentrated sulfuric acid".

Also, the court in *In re Meyer*¹⁵ similarly found that a genus does not necessarily describe a specie within the meaning of 35 U.S.C. § 102. In that case, the Applicant was claiming a process for preparing a certain chemical specie comprising "treating an alkali metal salt of the corresponding 2-nitrophenylpyruvic acid with an alkali metal hypochlorite".¹⁶ The prior art disclosed the oxidation of the same specie using various oxidizing agents, including "alkaline chlorine or bromine solution", and more specifically, "sodium hypobromite", "calcium hypochlorite" and "sodium hypochlorite".¹⁷ In holding that there was no anticipation under 35 U.S.C. § 102(b), the court in *In re Meyer* stated that

For the [prior art reference] to constitute an anticipation, it must identically disclose or describe, inter alia, reacting an alkali metal salt of 2-nitrophenylpyruvic acid with an alkali metal hypochlorite. . . . The genus, "alkaline chlorine or bromine solution," does not identically disclose or describe, within the meaning of § 102, the species alkali metal hypochlorite, since the genus would include an untold number of species.¹⁸

The courts in *Petering*, *Meyer*, *Arkley* and *Akzo* are all in accord with the MPEP at section 2131.02 in finding that anticipation cannot be found when one skilled in the art is compelled to pick, choose and combine various disclosures "not directly related to each other". The Applicant contends that, in rejecting the current claims over *Imuta*, the

¹⁴ *Id.* at 1479.

¹⁵ 599 F.2d 1026, 202 USPQ 175 (CCPA 1979).

¹⁶ *Id.* at 1028.

¹⁷ *Id.*

¹⁸ *Id.* at 1031. (emphasis added)

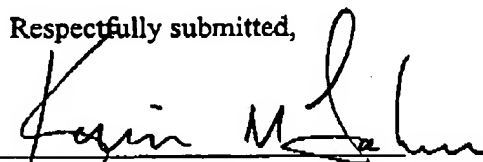
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Examiner has done just that. Given the interpretation of anticipation under section 102 by the courts, the Applicant's contend that the current rejection is incorrect and should be withdrawn.

The Applicant invites the Examiner to telephone the undersigned attorney if there are any other issues outstanding which have not been presented to the Examiner's satisfaction.

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Date

Respectfully submitted,



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